

**I. INTRODUCTION**

Claims 1, 41-55, 83, and 123-138 are currently pending in the above-identified application.

**II. RESTRICTION REQUIREMENT**

In the Restriction Requirement, the Examiner contends that the above-identified application contains claims directed to more than one distinct and divergent inventions:

Group 1: corresponding to claims 1, 41-54, 83 and 123-130 drawn to a process, computer-accessible medium, and system for producing one or more portions of a haplotyped or a genome wide map based on single DNA molecule maps; and

Group 2: corresponding to claims 55 and 131-138, allegedly drawn to a process, computer-accessible medium, and system for generating a haplotyped genome wide map for each individual patient, and performing a disease gene association based on the generated haplotyped genome wide map of each individual patient.

Applicants hereby elect Group 1 (i.e., claims 1, 41-54, 83 and 123-130) ***with traverse.***

In particular, the Examiner acknowledges that “inventions I and II are directed to related processes.” (Restriction Requirement, page 3). Related inventions

are distinct if: (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05.

Further, the Examiner acknowledges that “the invention of group I embodies both halotyped and genotyped genome wide maps, and therefore is not limited to a haplotyped genome wide map as required by the invention of group II.” (Restriction Requirement at page 3). However, merely showing that the two groups do not have identical scope, as contended by the Examiner on page 3 of the Restriction Requirement, is insufficient. The Examiner *must* show that “the inventions do not overlap in scope, i.e., are mutually exclusive.” MPEP § 806.05. These two inventions clearly include at least partially overlapping scope, and are therefore *not* mutually exclusive, as required to support the present Restriction Requirement.

Further, even if the two groups did included mutually exclusive scope, which they do not, the Examiner must still prove that there would be a serious search and/or examination burden. However, claim 1 (of Group 1) and claim 55 (of Group 2) have both already been examined, had searches performed therefor, and were subject to substantive examination. It cannot possibly be alleged that a serious burden exists to search and examine at least such claims that have already been searched and examined, by the Examiner.

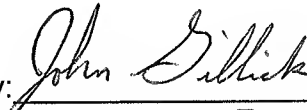
For at least these reasons the Restriction Requirement should be withdrawn, and the claims contained in Groups 1 and 2 should be examined on the merits.

III. CONCLUSION

In light of the foregoing, Applicants respectfully submit that the pending claims are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited. The Examiner is invited to contact the undersigned to expedite the prosecution of this application if any issues remain outstanding.

Respectfully submitted,

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